Scott Stamy 07-100

Data Flow Systems

March 29th, 2006

Office of the Secretaty
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Reference: Petition for Rules Change

Dear Sir or Madam:

We are writing to request a rule change to Part 90.259. Specifically, we request the following two changes:

That paragraph (a)(1) of 47 CFR Part 90.259 be modified to read: Frequencies in the 216-220 MHz band may be assigned to applicants that establish eligibility in the Industrial/Business Pool or ***the Public Safety Pool.***

That paragraph (a)(5) of 47 CFR Part 90.259 be modified to read: In the 217-220 MHz band, base, mobile, and operational fixed ***stations shall be pemitted for applicants that establish eligibility*** *in* ***the Industrial / Business*** *Pool. For* ***applicants that establish eligibility*** *in* ***the Public Safety*** Pool, *only* operational ***fixed stations shall be permitted***.

The frequency band from 216 to 220 MHz is designated for Industrial IBusiness users, although the frequencies from 216 to 217 MHz were re-allocated solely to services for the hearing-impaired in 2000. Nonetheless, since 1995, the FCC has granted fixed operational licenses to government entities for the purposes of water and wastewater management, monitoring, and remote control. Over 630 licenses have been granted for this purpose. These licenses are not mere pieces of paper. They represent nearly 4,000 critical infrastructure units nationwide. They represent nearly $40 million dollars invested in radio equipment over the last decade by more than 130 individual county and local governments to maintain the public health and well-being. This equipment, by allowing remote monitoring of potable water and wastewater systems, reduces personnel expenses for these communities, protects the environment and the public health from water contamination and raw sewage spills, and increases reliability and security by warning immediately of equipment failure or sabotage. We attest that such use of the radio spectrum represents a compelling public interest.

As previously stated, the FCC has, since 1995, granted many licenses in this band to government "Public Safety" entities. In 2000, the FCC agreed to change the rules governing the use of this band to allow fixed operational users in addition to base-mobile users, at the request of this company on behalf of those government entities. Finally, according to a recent query of the Universal Licensing System database, 631 out of the 891 Part 90 licenses in this band, over 70% of them, are assigned to government entities! Therefore, we attest that a significant precedent exists for authorizing government use of these frequencies.

This frequency band was selected because of the difficulty in obtaining fixed-operational licenses for government entities in the Public Safety Pool. These frequencies are primarily used by emergency services for mobile voice and data communication. There is a shortage of available frequencies in the public safety pool, a shortage which has reached critical proportions in some of the

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most populous areas of the nation. Any future spectrum made available to public safety will, for the foreseeable future, be in the 700-900 MHz realm. This spectrum is well suited to use in large-scale trunked voice networks in the nation's largest metropolitan areas; however, the equipment is too expensive for most small communities and the signal characteristics of those frequencies make them impractical for use in cost-effective fixed-operational systems.

Due to this shortage of spectrum and the critical nature of immediate, reliable voice communications for first responders and other emergency personnel, government fixed signaling is generally given a low priority in the public safety pool. Emergency services, by the nature of their duties, have limited use for fixed point-to-point signaling, usually only needing such systems for links between locations in their voice radio networks. Fixed operations in the public safety pool typically consist of water and wastewater management and remote meteorological stations at airports. These are important uses of the radio spectrum; however, due to the aforementioned shortages and priorities, government fixed-signaling systems have a very limited selection of public safety pool spectrum to choose from, as noted below:

150-173 MHz: There are 14 VHF frequencies in the public safety pool between 150 and 173 MHz available for fixed-operational use. Of these, 12 are restricted to 6kHz bandwidth or less and 2 are restricted to 3kHz or less. This allows insufficient bandwidth for the purposes of these telemetry applications. Furthermore, these frequencies are saturated with users almost nationwide.

450-470 MHz: There are two sections of Part 90 which allow for telemetry operations on the UHF frequencies in the public safety pool between 450 and 470 MHz. Part 90.261 provides for secondary use of one frequency pair, and has a list of frequencies on which fixed operations are forbidden. This is insufficient, because many communities must use more than one frequency pair to guarantee reliable and effective system coverage. Part 90.267(g) allows low-power fixed-operational, base, or mobile operation on 42 specific frequency pairs (nine of which, incidentally, are on the forbidden list of 90.261) with an absolute antenna height limit of 6.1 meters above ground level. The antenna height limit makes practical operations on these so-called low-power set-asides of 90.267 impossible for city-wide operations, due to the fact that the central station must, almost invariably, exceed that height to guarantee reliable communications with all remote sites.

800 MHz: Fixed operations in the 800 MHz band are expressly forbidden under 90.637(a). Furthermore, as mentioned above, 800 MHz equipment is expensive, and the signal-propagation characteristics are not well suited to point to point signaling over ranges of several miles or more where line-of-sight cannot be guaranteed.

900 MHz: Fixed operations are permitted in the 900 MHz band; however, new applications in this band are currently frozen due to the 800 MHz re-banding effort, per FCC Public Notice DA-04-3013. Even if this were not the case, the 900 MHz band is extremely poorly suited to the task of monitoring water and wastewater systems. The propagation characteristics would limit these systems, usually located throughout populated areas, to line-of-site operations. This would require using taller towers, which is more expensive and often unacceptable in residential areas. Finally, the 900 MHz radios themselves are much more expensive than VHF equipment, putting this solution further out of reach of a small community.

It would be ideal if several megahertz of VHF spectrum (which is very well suited for cost-effective point-to-point signaling) could be allocated solely to state, county, and local government fixed-signaling operations on a primary basis. Given the current state of the radio spectrum, it is clear that this would be very difficult to grant, to say the least. Also, if government users were allowed the use of base-mobile equipment in the 216-220 MHz range, they would most likely fully saturate the

band in many areas by the end of the decade, totally defeating the purpose of allocating spectrum to telemetry users, and disrupting commercial use of these channels. However, allowing government entities to use this spectrum for fixed operations only, sharing with industrial and commercial users, as the FCC has permitted for the past ten years, would adequately provide for the public interest with a minimal impact on the radio spectrum.

If government entities are permanently locked out of this frequency band, it would create significant problems and cost burdens for over 130 counties and localities in at least 8 states. They would be instantly unable to upgrade or expand critical infrastructure systems which the FCC has permitted them to license over the last decade. Any future expansion would force them to spend, collectively, millions of dollars to re-tune or replace all their radios, or to operate two inherently incompatible systems. This would be severely detrimental to these communities, especially as many of them are in the most rapidly growing areas of the country, such as southwest Florida, and invested in these systems to manage the problems of rapid growth.

Please accept this petition in the spirit in which it is requested, for the public good

Respectfully Submitted,

Thomas F Smaidris
Data Flow Systems, Inc.

CC: The Honorable Mel Martinez, FL
The Honorable Bill Nelson, FL
The Honorable David Weldon, Dist. 15, FL
The Honorable Jeb Bush, Governor of Florida
The Honorable Bill Posey, State Senator, Dist. 24, FL
The Honorable Thad Altman, State Representative, Dist. 30, FL
Catherine W. Seidel, Acting Chief of Wireless Telecommunications Bureau
John Branscome, Chief of Spectrum & Competition Policy Div., WTB
Michael Wilhelm, Chief of Public Safety & Critical Infrastructure Div., WTB